



DEPARTMENT OF MOLECULAR DIAGNOSTICS LABORATORY



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Molecular Diagnostics Lab





**Sri Nathella Sampathu Chetty Clinical Laboratory, Sankara Nethralaya
(A UNIT OF MEDICAL RESEARCH FOUNDATION)**

2023



**SRI NATHELLA SAMPATHU CHETTY CLINICAL LABORATORY,
SANKARA NETHRALAYA (A UNIT OF MEDICAL RESEARCH FOUNDATION)**

MOLECULAR DIAGNOSTICS LABORATORY

**Venugopal block (VG block) Ground Floor
(Opposite to Main Laboratory)**

No: 41, College Road, Nungambakkam, Chennai- 600 006

Phone: 044- 42271500 Extn no: 1153, 1154

Direct Land Line number: 044-4221987

E-mail: microbiology@snmail.org, drdhanu@snmail.org

LABORATORY TIMINGS:

Monday to Saturday: 8.30 am – 5.30 pm

Contact Person: [Dr. L. Dhanurekha \(9551101660\)](#)

Authorized Signings Authorities:

Dr.L.Dhanurekha Ph.D, Senior Scientist,

Dr.AR.Anand Ph.D, In-Charge-Microbiology and Serology



MOLECULAR DIAGNOSTICS LABORATORY TEST MASTER LIST

S. No	Test Code	Name of Test	Sample to be collected	Volume Criteria	Turnarou und time*	Temperature of Storage	Schedule of reporting	Lab tariff in Rs.
1	461	Real-time PCR for Cytomegalo Virus (CMV)*	EDTA blood, Urine, AC Tap, CSF, BAL, Amniotic fluid, Vitreous aspirate, Nasopharyngeal aspirate and other body fluids	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	Same of testing	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Friday	8000
2	422	Real-time PCR for Herpes Simplex Virus (HSV) (Qualitative)*	EDTA blood, Urine, AC Tap, CSF, BAL, Amniotic fluid, Vitreous aspirate, Nasopharyngeal aspirate, endocervical swab/ scraping, Urethral swab, vesicular fluid/lesion scraping, corneal scraping.	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	Same of testing	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Tuesday & Friday	4500
3	420	PCR for <i>Mycobacterium tuberculosis</i> (<i>M. tb</i>) –	Ocular specimens, CSF, BAL, Amniotic fluid, Sputum, other body fluids and	CSF, BAL, Amniotic Fluid, Body fluids - 2-3 ml	24- 48hrs	Body fluid/ Tissue – transported in wet ice and stored at	Daily	4500



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		MPB64 & IS6110 Gene	biopsy.	AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml		2-8°C		
4	421	PCR for Cytomegalo virus (CMV)	EDTA blood, Urine, AC Tap, CSF, BAL, Amniotic fluid, , other body fluids, Vitreous aspirate & other ocular specimens.	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	3500
5	423	PCR for Varicella Zoster Virus(VZV)	EDTA blood, Urine, AC Tap, CSF, BAL, Amniotic fluid, , other body fluids, Vitreous aspirate & other ocular specimens.	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	3500
6	424	PCR for Adenovirus	EDTA blood, conjunctival swab, Throat swab, Nasopharyngeal aspirate,urine, Sputum, BAL	2-3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	4000
7	425	PCR for <i>Chlamydia trachomatis</i>	EDTA blood, Conjunctival swab/ scraping, Pharyngeal	EDTA blood: 2-3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and	Daily	3500



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			aspirate, Endocervical swab, Urethral swab			stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C		
8	426	PCR for Eubacterial genome	Any ocular & extra ocular specimens Blood & Body fluids Biopsy / Tissue	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Daily	3500
9	427	PCR for Pan fungal genome	Any ocular & extra ocular specimens Blood & Body fluids Biopsy / Tissue	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Daily	3500
10	428	PCR for <i>Propionibacte rium acnes(current name- Cutibacterium acnes)</i>	Any ocular & extra ocular specimens Blood & Body fluids Biopsy / Tissue	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Daily	3500
11	429	PCR for <i>Toxoplasma</i>	Any ocular specimens, Blood	EDTA blood, CSF,	24- 48hrs	Blood (Plasma) –	Daily	3500



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		<i>gondii</i>	& Body fluids, Subretinal abscess	Amniotic Fluid, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml		transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C		
12	491	PCR for Non- Tuberculous Mycobacteria targeting hsp65 gene	Any clinical Specimen	CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	3500
13	275	PCR for Acanthamoeb a Sps	Corneal scraping, Vitreous aspirate, AC Tap& other ocular specimens.	AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	3500
14	492	DNA sequencing for Amplified products*	PCR amplified products	---	72-96 hrs	2-8°C	4 working days	4000
15	498	PCR for sequencing for MYD88 L265 Mutation*	AC Tap, Vitreous aspirate Sub retinal biopsy	AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	72-96 hrs	Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	4 working days from the day of PCR completi on.	7500
16	497	Product for DNA sequencing loading*	PCR product	-----	72-96 hrs	2-8°C	4 working days	500
17	462	Quantitative real time PCR for HSV	EDTA blood, Urine, AC Tap, CSF, BAL, Amniotic fluid,	EDTA blood, CSF, BAL, Amniotic	24- 48hrs	Blood (Plasma) – transported in 2-8°C and	Daily	7000



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			Vitreous aspirate, Nasopharyngeal aspirate and other body fluids	Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml		stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C		
18	452	RT - PCR for <i>Rubella Virus</i>	Ocular specimens, EDTA Blood, Urine, CSF, Amniotic fluid	EDTA blood, CSF, Amniotic Fluid- 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Transported in Dry ice and stored at - 70°C or lower	Daily	6000
19	273	Real Time PCR for <i>Toxoplasma gondii</i>	Any ocular specimens, EDTA Blood & Body fluids, Subretinal abscess	EDTA blood, CSF, Amniotic Fluid, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	6000
20	453	PCR for HLA B27 ^{^*}	EDTA blood	2- 3 ml	Same day of testing	Blood – transported & stored in 2- 8°C	Tuesday , Thursday & Saturday	4000
21	459	Real-time PCR for HIV- 1	EDTA blood , Amniotic membrane	2-3ml	24- 48hrs	Transported in Dry ice and stored at - 70°C or lower.	Daily	9000
22	460	Real time PCR for Chikungunya virus	EDTA Blood , CSF	2-3 ml	24- 48hrs	Transported in Dry ice and stored at - 70°C or lower.	Daily	5000



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23	463	Real-time PCR for <i>M.tuberculosis</i> s*	EDTA blood/ Ac tap/ Vitreous aspirate Any clinical specimen	EDTA blood, CSF, Amniotic Fluid, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	Same day of testing	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Wednes day	8500
24	464	Real-time PCR for Hepatitis B Virus	EDTA blood, Amniotic membrane	2-3 ml	24- 48hrs	Blood – transported & stored in 2-8°C	Daily	9000
25	465	Real time PCR for Hepatitis C virus	EDTA blood, Amniotic membrane	2-3 ml	24- 48hrs	Transported in Dry ice and stored at - 70°C or lower.	Daily	9000
26	467	PCR based DNA Sequencing*	Any unidentifiable bacteria/ fungi for the identification of species level from clinical specimens/ isolates	----	Same day of testing	2-8°C	4 working days from the completion of PCR	7000
27	474	PCR for <i>Salmonella typhi</i>	EDTA blood , Ocular specimens	EDTA blood, - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Daily	3500
28	486	PCR for <i>Pneumocystis jirovecii</i>	Broncho alveolar lavage / Respiratory secretions Ocular & extra ocular specimens	2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Body fluid/ Tissue – transported in wet ice and stored at 2-8°C	Daily	4000



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29	489	Real-time PCR for Dengue Virus	Blood , CSF, ocular specimens	2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Transported in Dry ice and stored at - 70°C or lower.	Daily	5000
30	496	Real-time PCR for Varicella Zoster Virus (VZV)*	EDTA blood, Urine, AC Tap, CSF, Amniotic fluid, , other body fluids, Vitreous aspirate & other ocular specimens.	EDTA blood, CSF, BAL, Amniotic Fluid, Aspirate, Body fluids - 2-3 ml AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	Same day of testing	Blood (Plasma) – transported in 2-8°C and stored at - 20°C Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Wednes day & Saturda y	6000
31	499	PCR for Pythium insidiosum	Corneal scraping, Vitreous aspirate, AC Tap& other ocular specimens.	AC Tap, Vitreous Aspirate – 0.1 – 0.3 ml	24- 48hrs	Body fluid/ Tissue – transported in wet ice and stored at 2- 8°C	Daily	3500

*** - BATCH TEST PERFORMED IN MDL**



GENERAL PROTOCOL FOR SAMPLE COLLECTION

A. Sterile containers:

Bacteriology and Mycology Investigations (culture and PCR)

- Sterile swabs: Pus, infected wounds, throat, nose, vaginal secretions or other site.
- Sterile wide-mouthed containers for C.S.F, body fluid such as ascitic, pleural, synovial fluids and urine.
- Sterile containers, with screw cap and wide mouth for pus, urine, sputum, feces scrapings from any site & biopsies.
- For blood culture - Automated: BACTEC blood culture system bottles.
- For Anaerobic culture: Specimen inoculated immediately into Robertson Cooked Meat (RCM) media
- Blood samples- EDTA blood for PCR investigations

Viral investigation (PCR)-

- specimen in a sterile viral transport media

B. Transportation of clinical specimens:

The collected specimens can be transported to the laboratory in following temperatures and time period given below:

Test request	Transportation Temperature	Stipulated time period
Bacteriology		
Direct smears	Room temperature	24-48 hours
Bacterial and Fungal culture	4-8°C (except for CSF – room temperature)	24- 48 hours
Serology	4-8°C	24-48 hours
Molecular testing		
DNA analysis	room temperature 2-8°C	Within 24 hours Within 72 hours
RNA analysis	-70°C or lower/dry ice	Within 24 hours



C. Specific instruction on transportation of clinical specimens:

(i) Package of clinical specimens after collection to the Molecular Diagnostics Laboratory:

a. Primary Package:

The clinical samples should be in a sealed container, eg. sealed Vacutainer™ / specimen container.

b. Secondary Package:

If the sample is liquid, then the sealed primary container should be placed inside a sealed leak proof secondary package such as a sealed plastic bag or another watertight container sufficient to contain all of the liquid content if the primary container breaks. One bag per patient is advisable. Request form must be separately kept in a compartment/pouch and not put together with the sample pouch.

c. Tertiary Package:

A rigid sealed/secured outer container e.g. a cardboard box or plastic container, to house the secondary package.

d. Special Requirement for Frozen Samples:

For temperature sensitive samples the secondary container may also be a polystyrene box containing wet/dry ice. The box should be sealed with tape. The polystyrene box then placed inside a tertiary package with labeling.

In the final package box to be dispatched, laboratory address should be clearly labeled and transported.

(ii) Procedure for mailing of samples with details as below

- a. Name of the patient
- b. Age of the patient
- c. The type of material (specimen with site specification)
- d. Proper container- sterile, leak proof
- e. Date and time of collection
- f. Doctor's name
- g. Adequate clinical summary and clinical diagnosis with antibiotic history if relevant.

All the three containers should have a bio-hazard label stuck on the outside of the containers.



The specimen should be mailed to:

Molecular Diagnostics Laboratory
SankaraNethralaya,
No: 41, Old no: 18, College Road,
Nungambakkam, Chennai- 600 006
Phone: 044- 42271500 Extn no: 1153, 1154
Direct Land Line number: 044-4221987
E-mail: microbiology@snmail.org, drdhanu@snmail.org

D. Samples received for other Laboratory investigations:

If the clinical sample is common for either Microbiological or histopathological investigations, apart from Molecular testing, an aliquot of the sample will be submitted to the respective laboratories along with the test request form after obtaining approval/acceptance from the respective technical team.

Note: If the specimens are sent for both microbiological as well as for histopathological investigation, the specimen would be received in unfixed condition without formalin for microbiological examination.

D. ACCEPTANCE / REJECTION CRITERIA FOR RECEIVING SPECIMEN

S. No	Acceptance Criteria	Rejection Criteria
1.	Properly labeled specimens. 1. Full patient name, age, sex 2. Patient identification number. 3. Date and time of collection	Improperly labeled specimens: 1. Specimens not labeled 2. Specimens labeled with the incorrect patient identification 3. Specimens, that do not match the patient information on the laboratory requisition.
2.	Correct Specimen Collection 1. All clinical specimen collected in sterile container 2. Specimens collected with proper preservative or anticoagulant. 3. Correct volume 4. Collected specimen without any hemolysis or particulate matter	Improper Collection: 1. Specimen for culture received in unsterile containers/ non-laboratory containers as evidenced by contamination of containers. 2. Specimens collected with the improper preservative or anticoagulant 3. Quantity of specimens insufficient to perform testing



	<p>5. Specimen without any contamination</p> <p>6. Specimen sent in normal saline, without formalin</p> <p>7. Specimens collected from proper venipuncture site</p>	<p>4. Specimens which are hemolyzed, or contain particulate matter.</p> <p>5. Specimens which are obviously or subsequently prove to be contaminated.</p> <p>6. Samples sent in formalin</p> <p>7. Specimens collected from intravenous tubing and specimens collected in heparin tubes for PCR.</p> <p>8. Formalin fixed paraffin embedded block/sections for PCR</p>
3.	<p>Appropriate transportation</p> <ol style="list-style-type: none"> Specimen sent within the time limit prescribed by the laboratory. Specimen transportation with appropriate packing. Transportation of Specimens in 3 tier packing system. Clinical specimen transported in appropriate transport medium for tests requested 	<p>Delay in Transportation to the laboratory:</p> <ol style="list-style-type: none"> Specimens not in compliance with universal precaution, (e.g. Not Bagged) Specimens leaking or grossly contaminated on the exterior portion of container. Note: Irretrievable specimens, such as Cerebrospinal fluid (CSF), operating room specimen, biopsy specimens will not be discarded. Samples which are not sufficient/ single swab submitted for multiple requests (for e.g. direct smear study and culture for aerobic and anaerobic bacteria, fungus and <i>Mycobacterium tuberculosis</i>/ isolation of viruses etc)
4.	<p>Samples collected before initiation of antibiotic therapy for bacterial isolation.</p>	<p>Samples collected after initiation of Antibiotic therapy for bacterial isolation.</p>
5.	<p>Mid-stream urine samples for culture collected with aseptic precautions and transported within one hour to laboratory.</p>	<p>Urine specimens left at room temperature for more than one hour.</p>
6.	<p>Sputum sample abiding with the Barlett's grading system</p>	<p>Sputum sample not abiding with the Barlett's grading system</p>